March-19-13 1:53:30 PM

Item ID:

D2966-1-BENT

Accept

\*N900040100\*

Setup Start

**Revision ID:** 

Item Name:

Skidtube Assembly 105

Start Qty: 1.00

**Cust Item ID:** 

**Start Date:** Required Date: 3/22/13

3/19/13

**Req'd Qty:** 1.00

**Customer:** 

Reference:

Approvals:

Process Plan: MLJ Date: 13-03-19 Tooling:

Date:

Run

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID Operation Description

Set Up/ **Run Hours**  Tool ID

Tool # Plan Code

Accept Qty

Reject **Qty** 

Reject Insp. Number Stamp

Draw Nbr

120

**Revision Nbr** 

D2966 Rev A

**BENDING MACHINE - SKIDTUBES** 

\*120\* CNC Bend 1

Memo

0.00

0.00

CNC Delta 100 Bender

1-Bend tube as per program BO105 on CNC Bender and Dwg D2966. Bend

folio #1 use bending aid DT9631

QC5- Inspect part completeness to step on W/O

2-Cut Fwd end of the tube using DT8185-1

150

\*150\* QC

0.00

Quality Control

Memo

0.00

- DC 13/06/19.

300

\*300\* Packaging

Packaging

Identify as per dwg & Stock Location:\_ Packaging

0.00

Memo

0.00

										DQA:	Date	e:	
NCR: Y	es / No				WORK ORDER NON-O	CON	FORM	MANCE / UPDA		QA Closed:	Date	· ·	
		·			DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Work Orde	r:					,			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · · · · · · · · · · · · · · · · ·	_		
Part No					Rework Scrap Use-as-is		Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing			Water Jet Prod. Eng. Coor. Rec/Store/Packaging		Engineering Quality Other	
NCR N	0	MAN 200			Work Order Update	J		Large Fab	Composite		Supplier	┙	
Root					ption of work order update		itial	Actio		Sign &			
Cause	Date	Step	Qty	,	or Non-conformance	Chie	ef Eng	Descrip	tion	Date	Verification	QC Inspector	
oc/Data	_	1											
quip/Tooling													
Operator	_					1							
Material	_										i		
etup	-												
Other						1							
rocess													
upplier raining	_	1											
Inapproved													
Jiappioved	<u> </u>	<u> </u>	1		F	AULT	CATE	GORY		L			
Landir	ng Gear				General								
	Bendin	3			Bend	П	Grain			Ovalized	Γ	Pressure/Forced	
İ	Centre Not Concentric to O/S			o/s	BOM/Route	П	Hardwa	re		Over/Under tolerance		Temperature/Cure	
	Cracks				Broken/Damaged	$\square$	nspecti	on Incomplete		Part Incorrect		Weld	
	Crushed/Crimped				Burrs		nstruct	ions Incomplete/Un	clear	Part Lost/Mi	ssing	Wrong Stock Pulled	
Ì	Cuffs				Contamination		Mainte	enance		Part Moved		_	
	Heat Tr	eat		[	Countersink		Mislabe	led		Positioned V	Vrong _	_	
	Inspect	ion Strip ir	Tube		Cut Too Short		Misread	i		Power Loss/	Surge	Other	
	Ripples	in Bend			Drill Holes		Offset						
	Torque	Waves in	Extrusio	n _	Drawing		Out of 0	Calibration				, , , , , , , , , , , , , , , , , , ,	
	Turning	Sequence	<b>:</b>		Finish	Out of Sequence							

Outside Dimensions

Wave/Twist in Tube

Folio

\*98667\*

Page 2

March-19-13 1:53:30 PM

Item ID:

Required Date: 3/22/13

D2966-1-BENT

Accept

\*N900040100\*

Setup Start

**Revision ID:** 

Item Name: Skidtube Assembly 105

Start Date:

3/19/13

QC:

Start Qty: 1.00 Req'd Qty: 1.00

Date:\_\_\_

**Cust Item ID:** 

**Customer:** 

Reference:

Approvals:

Process Plan:

Date:

Tooling:

SPC (Y/N):

Date: Date: Run

Stop

Sequence ID/ Work Center ID

310

\*310\*

Operation Description

QC21- Final Inspection - Work Order Release

Memo

Set Up/ Run Hours

0.00

Tool ID

Tool # Plan Code Accept Qty

Reject Qty

Reject Insp. Number Stamp

Quality Control

0.00

		•								DQA:	Date:	
NCR: Yes	s / No				WORK ORDER NON-C	ONF	ORN	/ANCE / UPI	DATE	QA Closed:	Date:	
Work Order:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part No			Rework Scrap Use-as-is Work Order Update	Thern		Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		Engineering Quality Other		
Root				Descri	ption of work order update	Init	tial	Act	ion	Sign &		
Cause	Date	Step	Qty	(	or Non-conformance	Chief	f Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data												
quip/Tooling		ļ						i			:	
Operator								l				
Material								I				
Setup	1		ļ					1				

## **Landing Gear** General Bend Ovalized Pressure/Forced Bending Grain BOM/Route Centre Not Concentric to O/S Over/Under tolerance Temperature/Cure Hardware Broken/Damaged Part Incorrect Weld Cracks Inspection Incomplete Part Lost/Missing Wrong Stock Pulled Crushed/Crimped Burrs Instructions Incomplete/Unclear Cuffs Contamination Maintenance Part Moved Heat Treat Countersink Mislabeled Positioned Wrong Other Power Loss/Surge Inspection Strip in Tube Cut Too Short Misread Drill Holes Ripples in Bend Offset Out of Calibration Torque Waves in Extrusion Drawing Turning Sequence Finish Out of Sequence

Outside Dimensions

**FAULT CATEGORY** 

Wave/Twist in Tube

Folio

Other Process Supplier Training Unapproved

## **Picklist Print**

March-19-13 1:53:35 PM

Work Order ID: 98667

\*98667\*

Parent Item:

D2966-1-BENT

\*D2966-1-RFNT\*

Parent Item Name: Skidtube Assembly 105

**Start Date:** 3/19/13

Required Date: 3/22/13

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP rev A 10.09.17 New issue EC verified by:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2962-125 *D2962-12 Outer Tube Extrusion		Manufactured	No				Each	9.0000	**	1 Dc 13,	/66/a:	?	
				<u>Location</u>		Loc C	<u>Oty</u>	Loc Code					

Loc Oty Loc Code **Location** HALL

9

Page 1

NCR:	Yes	1	No
IICII.	163	1	110

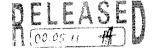
	/ No				WORK O	RDER NON-C	O	NFORN	/IANCE / UPI	DATE		DQA: QA Closed:		ate: <sub>.</sub> ate:	
ŕ:					DIS	DISPOSITION AGAINST								2	
Nork Order:  Part No.  NCR No.					Scrap Machining Small Fall Use-as-is Thermoforming Finishing			Small Fab Finishing		Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier			Engineering Quality Other		
				Desc	ription of work	order update		nitial	Act	ion		Sign &			
	Date	Step	Qty		or Non-confor	mance	Ch	ief Eng	Descr	ription	Į	Date	Verification	on	QC Inspector
	•						AUL	T CATE	SORY						
Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Turning Sequence			Bend BOM/Route Broken/Dam Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish	naged		Inspecti Instruct Mainte Mislabe Misread Offset Out of C	on Incomplete ions Incomplete/U nance led Calibration equence	Jnclear		Over/Under Part Incorrec Part Lost/Mis Part Moved Positioned W	ct ssing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other		
•	0 0	Date  Date  Date  Bending Centre No Cracks Crushed/C Cuffs Heat Trea Inspection Ripples in Torque W Turning Se	Date Step  Date Step  Date Step  Bending Centre Not Concer Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Ripples in Bend Torque Waves in E Turning Sequence	Date Step Qty  Date Step Qty  Bending Centre Not Concentric to C Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion	O	o	Rework Scrap Use-as-is O.  Date Step Qty Description of work order update or Non-conformance  Fig Gear General Bending Bending Centre Not Concentric to O/S BOM/Route Cracks Broken/Damaged Crushed/Crimped Burrs Crushed/Crimped Cuffs Heat Treat Contamination Heat Treat Countersink Inspection Strip in Tube Ripples in Bend Drill Holes Torque Waves in Extrusion Turning Sequence Finish	Rework Scrap Use-as-is Work Order Update  Date Step Qty Description of work order update or Non-conformance  FAULT Gear General  Bending Centre Not Concentric to O/S BOM/Route Broken/Damaged Crushed/Crimped Burrs Cutshed/Crimped Burrs Countersink Countersink Inspection Strip in Tube Ripples in Bend Drill Holes Torque Waves in Extrusion Turning Sequence Finish	Rework Scrap Use-as-is Work Order Update  Date Step Qty Description of work order update or Non-conformance Chief Eng  FAULT CATE  Gear General  Bending Centre Not Concentric to O/S BOM/Route Cracks Broken/Damaged Instruct Crushed/Crimped Burrs Instruct Cuffs Contamination Mainte Heat Treat Countersink Mislabe Inspection Strip in Tube Cut Too Short Misread Ripples in Bend Drill Holes Offset Torque Waves in Extrusion Drawing Out of Strip Instruct Out of Strip Instruct Out of Strip Instruct Offset Torque Waves in Extrusion Drawing Out of Strip Instruct Out of Strip Instruct Out Too Short Offset Torque Waves in Extrusion Drawing Out of Strip Instruct Out of Strip Instruct Out of Strip Instruct Out Too Short Offset Turning Sequence Finish Out of Strip Instruct Out Out of Strip Instruct Out Out Of Strip Instruct Out Out Out Out Out Out Out Out Out Ou	Rework Scrap Use-as-is Work Order Update Use-as-is Work Order Update Thermoforming Large Fab Use-as-is Work Order Update Thermoforming Large Fab Use-as-is Work Order Update Thermoforming Large Fab Use-as-is Work Order Update Or Non-conformance Chief Eng Description of work order update Or Non-conformance Chief Eng Description Or Non-conformance Chief Eng Descript	Rework Scrap Use-as-is Work Order Update Unitial Composite    Date   Step   Qty   Description of work order update or Non-conformance   Chief Eng   Description	Part	Rework Scrap Use-as-is Work Order Update Use-as-is Work Order Update Date Step Qty Or Non-conformance Chief Eng Description Date Step Qty Or Non-conformance Chief Eng Description Date Date Step Qty Or Non-conformance Chief Eng Description Date Date Step Qty Or Non-conformance Chief Eng Description Date Date Date Date Date Date Date Date	Part Lost Part Norted Part Nort Cores Part Norted Positioned Norted Positioned Positioned Power Loss/Surge Ripples in Bend Drill Holes Offset Out of Sequence Part Norted Positioned Ported Part Norted Power Loss/Surge Power Loss/Surge Power Loss/Surge Power Loss/Surge Part Norted Part Norted Positioned Power Loss/Surge Power Loss/Surge Power Loss/Surge Power Loss/Surge Power Norted Part Norted Part Norted Power Loss/Surge Power Loss/Surge Power Loss/Surge Power Loss/Surge Power Norted Part Norted Part Norted Part Norted Power Loss/Surge Power Lo	The step of the st





DESIGN	DRAWN BY	DART AEROSPACE USA BELLEVUE, WA	, INC.
CHECKED	APPROYED	DRAWING NO.	REV. A
#	<b>*</b>	D2966	SHEET 1 OF 2
DATE		TITLE	SCALE
00.03.08		BO 105 SKIDTUBE ASSEMBLY	NTS
Α	00.03.08	NEW ISSUE	

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Qty	Part Number	Description
Х	D2966-041	SKIDTUBE ASSEMBLY
1	D2962-125	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2970-1	WEARPLATE
1	D2970-3	WEARPLATE
1	D2971	CROSS BOLT SPACER
7	D2973	CROSS BOLT SPACER
1	D2976	WEB
36	ALS7-1032-130	INSERT
	or ALS4-1032-130	
	or AKS7-1032-130	1
	or AKS4-1032-130	
28	AN960JD10L	WASHER
26	MS27039-1-08	SCREW
2	MS27039-1-09	SCREW
ı	D3176-1	Bushing
1	D3176-3	Nut

A2

## **GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) WELDING TO BE DONE PER DART QSI 004.
- 3) INSERT D2976 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 4) USE DART DRILL TEMPLATE DT8451 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION B-B (34 PLACES) AFTER FINISH. SEAL WEARPLATE SCREWS WITH SIKAFLEX-241/-291.
- 5) DO NOT INSTALL MS27039-1-08 SCREWS AND AN960JD10L WASHERS IN THESE LOCATIONS.
- 6) INSTALL ALS7-1032-130 INSERT, MS27039-1-08 SCREW, AND AN960JD10L WASHER IN 2 PLACES THIS LOCATION BEFORE POWDER COATING.
- 7) FINISH

ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2976 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4 (OPTIONAL)

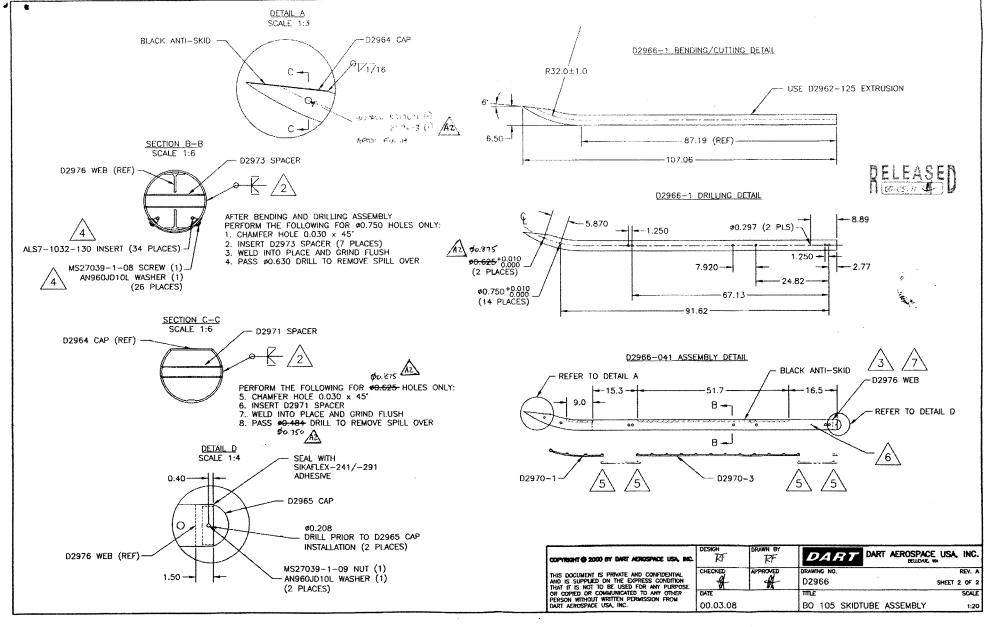
BLACK SHAPTEY (REF 4.3.5.1)

# 01.01.71 (Parolis

AZ	02.10.30	ADD I	13176-	1/-3		140
ΑI	01.01.25	(HANGE	LOLOR	to BL	ACK SANDTE	XHIP

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